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Chapter : 5
Section : 1
Directive : 2

Effective Date : 07/01/1992
Revision Date :
Subject : **MATERIAL QUALITY ASSURANCE DOCUMENTATION, MATT SYSTEM & FORM 2059**

1. **PURPOSE**. The purpose of this directive is to describe the minimum requirements for documentation of material quality on construction projects.

2. **SCOPE**. This directive describes a procedure for documenting materials quality, a procedure that assures compliance with minimum sampling and testing requirements and a procedure for explaining the disposition of non-conforming materials.

3. **PROCEDURE**. To accomplish the purpose of this directive project personnel and district laboratories are to comply with the following.

A. DEVELOPMENT OF SAMPLING PLAN. Prior to the preconstruction conference, the project engineer, in cooperation with the district laboratory engineer, will prepare a sampling plan for the project; one copy of which will be retained by project personnel, another copy by the district laboratory, and a third copy furnished the contractor. The sampling plan is to show the minimum number of documents or samples required to insure adequate quality assurance of all materials incorporated into the project. Attachment No. 1 is an example of an acceptable sampling plan.

A list of standard contract items, showing most documents and tests required to insure adequate quality assurance, is contained in the Department's Materials Sampling Manual. The manual, along with the project specifications and plans, should be used as source documents in the preparation of the sampling plan.

For some materials it is not practical to predetermine the number of documents or samples required. For those materials it is acceptable to show only the required minimum frequency of sampling (without showing a specific number of samples required) and enter the number of samples required upon completion of the item. If no sampling and testing is required, the project engineer is to so advise the DOTD Construction Engineering Administrator by letter, with copies to the district administrator, the district laboratory engineer and the Federal Highway Administration (or Federal Aviation Administration) if applicable.

B. ESTABLISHING THE QUALITY ASSURANCE DOCUMENTS FILES. In establishing files for quality assurance documents, at least one file is required for each contract item in the sampling plan, plus one for failing reports. Often, to keep files to a manageable size, separate files may be needed for various components that are used to make up an item.

C. IDENTIFICATION OF QUALITY ASSURANCE SAMPLES. All samples submitted to any department laboratory for testing will be accompanied by the MATT input form appropriate to that material. Materials for which MATT input forms are not stocked (miscellaneous materials, for example) will be accompanied by a Form 03-22-0800. The applicable header information on these forms will be filled out by the person submitting the sample.

Although proper completion of all of the fields on the forms are important, specific instructions for filling out the forms are beyond the scope of this directive. However, three fields need particular emphasis.

(1) Item No. This field is reserved for item number entries only. The item number must be entered EXACTLY as shown in the contract (including leading zeros if any) or as established by the district laboratory engineer for "generic" specification section entry (501, 701, 805, etc.). Only one item number entry per form is allowed; sampling under multiple item numbers is not allowed except in special cases approved by the district laboratory engineer.

(2) Header Remarks. This field, usually near the top of the form, is filled out by the person taking the sample, and is used to provide information relative to the sample or clarification of the sample. The field may be left blank if no remarks are appropriate.

(3) Disposition Remarks. This field, usually near the bottom of the form, is first filled out by the tester of the material if any remarks by the tester are appropriate. If the material passes, no comment is generally made by the tester.

If the material fails and if acceptance at reduced pay is allowed by the project specifications, the tester might remark that the material is eligible for xx% pay. The field could also be used to notify the project engineer that the material is a borderline material or has failed marginally.

In the case of a failing test it is mandatory that project engineer use this same field to explain the disposition of the failing material, as discussed at section "F" of this EDSM.

D. DAILY MAINTENANCE OF SAMPLING PLAN. Project personnel and the district laboratory will routinely record, in their respective copies of the sampling plan, the number of samples taken and certificates and other quality assurance documents received for each material. The sampling plan must at all times reflect the current status of the sampling and testing.

The sampling plan shall be revised when contract quantities are changed or new items added.

Failing samples will not be counted as a "sample taken" except in instances where the material is incorporated into the work, and no check sample is taken. Conversely, a check sample can be counted only when the original sample is not counted.

The project engineer, district laboratory engineer, project specifications or sampling manual may require that two or more check samples be taken to replace one failing sample. Regardless of the actual number of additional samples or tests taken, they still count as one insofar as the sampling plan is concerned.

In maintaining files, certificates that are supported by test reports (normally distributed sometime after the certificate) should be stapled together.

E. TEST REPORT REVIEW. The test report (or Logging Report) as printed by the MATT System must be thoroughly reviewed for conformance with the original source document from which the report was prepared. If there are discrepancies, a corrected copy of the report must be sent to the MATT System data entry person for update. If no discrepancies are found, and the material conforms to specifications, the sampling plan shall be updated and the report filed.

MATT System generated Logging Reports are considered informational reports and may be discarded after reviewing. Forms 03-22-0800 are informational and may be discarded after the test results covered by the form have been received and reviewed. If the project engineer receives "hard-copies" (printed copies) of MATT System generated passing reports, those copies are considered informational and may be discarded after review and after it has been verified that they appear on the Logging Report (hard copies of failing reports may not be discarded).

F. DISPOSITION OF FAILING TESTS. Failing test reports are to be filed in a "failing reports" file until disposition has been determined. A list of all failing reports, showing disposition with cross-references as applicable, shall be maintained in this file.

Except as discussed below, it is the project engineer’s responsibility to determine proper disposition, to ensure that such disposition is indicated on the test report, to sign (or initial) and date the disposition, and to ensure that the disposition remarks are entered in the MATT System. Such remarks should be concise and meaningful to provide adequate explanation of the disposition of the material.

The updating of the Disposition Remarks field on the computer is mandatory, and the disposition should be added to the comments that are already in the field, if space is available. If space is not available, the updating takes precedence, i.e., the mandatory disposition remarks will, if necessary, replace the information that was previously occupying the field.

For materials sampled by the Construction Materials Unit, it is their responsibility to determine proper disposition, to ensure that such disposition is written on the exception report, to sign (or initial) and date the disposition and for entry of disposition into the MATT System.

In the case of check samples, the failing report and the check samples will be cross-referenced by sample number, etc., and the Disposition Remarks field updated. When the report for the check sample is received it is to be stapled to the failing report. If the check sample passes, it (still stapled to the failing report) should be placed in its respective materials file.

If the material is left in place at reduced or no pay, the percent pay and the plan change number authorizing acceptance of the material is to be shown in the Disposition Remarks field. After the disposition has been entered in the computer, the report should be placed in its respective materials file.

It the failing material is not used on the project, the failing report may be discarded after the project engineer has verified that a "not used on project" disposition has been entered in the computer.

G. PROGRESS SUBMITTALS OF QUALITY ASSURANCE DOCUMENTS FOR REVIEW. As contract items are completed the quality assurance documents files associated with the items are to be promptly submitted to the district laboratory engineer for review, approval and intermediate storage. The following shall be included with the submittal.

+ Copy of the applicable portion of the project engineer’s copy of the sampling plan.

+ Applicable portions of the MATT generated "Special Report for 2059", including the "Disposition of Failing Tests".
*(See Attachment No. 2 Revised 5/92)

+ Copy of MATT generated logging report. (Optional, needed only if required by district laboratory.)

+ All applicable test reports (including failing tests reports), and any other document pertaining to the quality of the materials used in completion of the items.

+ A letter of transmittal, with copies to the district administrator and the DOTD Construction Engineering Administrator. In addition to identifying what is being transmitted, the letter or an attachment must explain each instance where the number of samples taken or certificates received is less than required by the sampling plan, and explain any other deficiencies in the transmittal.

Item by item submittals may not be desirable on all projects. For example, on small short duration projects it may be more feasible to make no progress submittals at all, i.e., make a final submittal only. On other projects it may be more desirable to submit in groups of (say) five completed items. This is to be worked out project by project by the project engineer and the district laboratory engineer. In no case shall the project engineer delay submittals, and at or near the end of the project, "dump" the quality assurance files on the laboratory.

H. SUBMITTAL OF FORM 2059 TO DISTRICT LABORATORY. Along with the last quality assurance documents progress submittal or shortly thereafter, Form 03-40-2059* is to be forwarded to the district laboratory. The following shall be included with the transmittal.

+ The project engineer’s copy of the sampling plan, clearly identified as the project engineer’s copy.

+ The MATT generated "Special Report for 2059". Prior to transmitting, the project engineer is to sign and date the "Disposition of Failing Reports" portion of the report. Do not separate or otherwise rearrange the report - - transmit as printed by the computer, "accordian style".

+ Copies of all letters of transmittals for progress submit tals.

+ Copies of all errors and omission reports, or other explanatory reports, if such are not part of the progress submittals transmittal letters.

I. REVIEW AND APPROVAL OF QUALITY ASSURANCE DOCUMENTS FILES. Receipt of all quality assurance documents file submittals shall be logged by the district laboratory. The district laboratory engineer is responsible for the detailed review and approval of all submittals, and advising the project engineer of any deficiencies not already explained. The project engineer is responsible for correcting or explaining the deficiencies.

Within five working days of receipt of the Form 2059 and attachments, the district laboratory engineer shall complete his review of the entire quality assurance documents file and notify the project engineer, in writing, of all deficiencies. The project engineer then has five working days to resolve the noted deficiencies and advise the district laboratory engineer of the resolutions. The district laboratory engineer shall then transmit the following, arranged in the order listed, to the district construction engineer.

+ Form 2059, signed by the project engineer and the district laboratory engineer.

+ Errors and Omission Reports, or other explanatory reports, signed by the project engineer.

+ District laboratory's log of receipts of quality control documents submittals.

+ Project engineer's copy of the sampling plan, clearly identified as the project engineer's copy.

+ District laboratory's copy of the sampling plan, clearly identified as the district laboratory's copy.

+ MATT generated "Special Report for 2059", including the "Disposition of Failing Reports", signed and dated by the project engineer.

+ All other quality assurance documents files.

The district construction engineer is responsible for reviewing and approving the Form 2059, the disposition of failing reports (if applicable), the errors and omissions report (if applicable), spot-checking the submittal, and resolving any deficiencies that have not been corrected. The District Construction Engineer shall review and approve the submittal within two working days after receipt and, after signing the 2059, forward the submittal to the Headquarters Construction Section.

The headquarters construction section is responsible for reviewing and approving the Form 2059, the disposition of failing reports (if applicable), the errors and omissions report (if applicable), and advising the Construction Estimates Engineer when approved.

4. **OTHER ISSUANCES AFFECTED**. This directive supersedes EDSM No. 111.5.1.2, dated May 7, 1981. All other directives, memoranda, or instructions issued heretofore in conflict with this directive are hereby rescinded.

5. **EFFECTIVE DATE**. This directive will be effective immediately upon receipt.

DEMPSEY D. WHITE
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